

From k7sz at live.com Mon Oct 1 15:12:55 2018
From: k7sz at live.com (Rich Arland)
Date: Mon, 1 Oct 2018 19:12:55 +0000
Subject: [BoatAnchors] Why We Served
In-Reply-To: <1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>,
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
Message-ID:
<BN6PR12MB18908D399A4A677881E28A4DF6EF0@BN6PR12MB1890.namprd12.prod.outlook.com>

AMEN!!

K7SZ

From: BoatAnchors <boatanchors-bounces at lists.theporch.com> on behalf of Wilson Lamb via BoatAnchors <boatanchors at lists.theporch.com>
Sent: Saturday, September 29, 2018 1:25 PM
To: boatanchors at lists.theporch.com
Cc: Wilson Lamb
Subject: [BoatAnchors] Fwd: Why We Served

Democracy is a messy business, especially when partisanship becomes more important than the common good.

There are so many disagreements right now that even defining the "common good" is difficult!

I love a good debate as much as anyone, but this is not the place to call names or troll for action!

Can we agree to leave politics off this antique radio group?

Since Arden's message is cryptic enough that I don't understand which side he's complaining about, we can stop with a neutral field.

73,

Wilson

W4BOH

BoatAnchors mailing list
BoatAnchors at lists.theporch.com
<https://lists.theporch.com/mailman/listinfo/boatanchors>

From kd5byb at kd5byb.net Mon Oct 1 19:19:41 2018
From: kd5byb at kd5byb.net (Ben Hall)
Date: Mon, 1 Oct 2018 18:19:41 -0500

Subject: [BoatAnchors] Rotary converter, power supplies.
Message-ID: <6e6bbda3-8509-2f29-4fdb-6dc016f98f3d@kd5byb.net>

Good evening all,

On a lark a few weeks ago I put in a bid on the "auction site we all know and love" for a Stoddart PU-151 rotary converter. Nothing special or unusual...12 VDC in, 120 VAC 60 Hz out. It needed the usual servicing to replace the waxy dried-out grease in the bearings with fresh Mobil SHC-100 electric motor grease...plus needed a new brush as one of the HV slip-ring brush springs had broken into at least 10 pieces. Thankfully, I found a workable substitute online at a motor brush shop. I paid more for the replacement brushes than I did the converter itself minus shipping.

I was able to power it up with no load on my usual bench power supply (0 to 30 volts, 6 amps) after giving it a little kick-start spin with my finger. It showed about 150 VAC output at 60 Hz. I thought that was high, but since there was no load, I went to put a small load on it. The 6 amp supply was insufficient and hit current limit. I needed a bigger power supply.

I recalled the Sorensen DCR 40-35 "Nobatron" power supply I got from Don Reaves at the 2017 Huntsville Hamfest. I fired it up after I got it home last year and while it worked, it had some stability issues. I put it into the "to be worked on pile". It was now time to troubleshoot it. Plus, I've got some other BA projects in the pipeline where I really need a good, high-amperage 24 VDC supply.

After lots of time on Google, I determined that Sorensen made a DCR series, a DCR-A series, and a DCR-B series. DCR-B manuals are all over the net, but nothing on an A or a plain DCR. Oddly enough, I came across an auction for a DCR manual on the e-place as well as a DCR-A manual.

The DCR series was nearly 100% Germanium technology. The DCR-A was early Silicon technology, and the DCR-B series had early IC's such as LM741's. Neat progression in design over time. What's really interesting is that the A series had the same schematic values as the plain DCR, just using Si devices in place of the Ge's! Few other changes than that. That was shocking to me, I thought converting Ge to Si took some doing, but okay, this made me happy as I figured that if I found an issue in the plain DCR with Ge transistors made from unobtainium...I likely could slap in an Si replacement. If it was good enough for the factory... :)

First rule of troubleshooting - check the power supplies. Onto the bench it went. Anyone else notice that old iron gains weight as it gets older? (sort of like myself, hahaha) Pretty sure I learned that first

ruse of troubleshooting here 20 years ago or so. The DCR has a 20 VDC power supply that powers all the active bits and it read only 11 VDC. Eeek. I noted that the pass transistor had been replaced at one point in time with a substitute. Hhmmm. It tested fine. As did all the other Ge transistors in the power supply. Further investigation found a 5.1 VDC Zener reference that was operating at 4.2 VDC. That got replaced with a fresh 5.1 VDC Zener and a quick tweak of the adjustment pot got it to 20 VDC output. A quick load test showed that everything was now working 100% and the supply was very stable. And it was audibly quiet, minus the whirl of the cooling fan. Excellent. I want to say I remember it having a load buzz under load...but if that was the case, it was now gone, or my memory stinks, you pick. ;)

Then I thought to myself - wait a second - I've got a DCR 40-13B Sorensen that makes a giant racket when under load - a load mechanical buzzing noise. It makes such a racket I never felt good about using it.

A buzz that loud can't be cool. (plus both meters on it were broken, power indicator was broken, etc...) So after narrowly avoiding a hernia the DCR 40-35 came off the bench and on went the DCR-B. Yep, under load the DCR-B sounded like a million 60 Hertz bees were invading my garage. I knew this wasn't right.

So off to the Google I went...what causes buzzing transformers in Sorensen supplies? No hits. Okay, what causes buzzing transformers period? Lots of answers - magnetostriction, loose cores, bad filter caps, bad rectifiers, lose hardware, too-tight hardware, purple lawyer aliens from the planet Mars, blah blah blah, etc... Filter caps were fine...rectifiers were fine...hardware was tight and covered in some sort of encapsulent, so that's the way they left the factory. Maybe this is just the way it is? I was resigned to this and thought - the transformer is slathered in encapsulent...it's core cannot be loose...so I pushed on it...and the bobbin moved on the core. Aaahhh!!! Apparently this was an issue, Sorensen slathered them in goo, and the goo on mine let go sometime in the past.

So back to the Google...what's the fix for a loose transformer bobbin? One reply said "take it to a motor shop and have it vacuum impregnated."

Uh, okay, expect that I doubt there is a motor shop in 200 miles from here...and how much would I pay for that? \$200? For a supply worth maybe \$50? Nah. Another said "slap on a whole bunch of shellac to glue it back together." Okay, I've used shellac before, I like it a lot, but didn't have any and ***WOW*** have shellac flake prices gone up since I bought some last. I'm not doing fine furniture here... ;)

Thinking about this...I needed something two-part like epoxy that could get into the innards...yet not require solvent evaporation to cure...as flammable solvent inside a transformer sounds like a bad idea. But most epoxy is too thick to wick inside.

Then I spotted some two-part fiberglass resin left over from a fuel tank repair. But it was rather thick. Can it be thinned? After another trip to the Google I found that yes, you can thin it, but with flammable solvents like alcohol and MEK. That still sounds like a bad idea.

Another webpage noted that you can heat up epoxy resin and it will thin out with heat...but at the cost of curing it faster. Well, that's fine, the two-part I had left over cured pretty slowly...my garage was about 90 deg F...as was the transformer. Mixed some up, stood the transformer on end, and poured it in. Put the heat gun on it for about three milliseconds and it started coming out the other end! Yikes! Put the transformer level and while some ran out onto the bench, a lot remained inside. Excellent. Let it cure, flipped it over, made some little "dams" to retain the resin, laid it flat, mixed up a new batch of resin, and poured it in. Some leaked out, but most stayed in. Excellent.

After a few days of curing, that bobbin isn't going anywhere. :) Fired it up with a test load and while it has a slight 60 Hz hum, it's not the buzzy the hummingbird-power-supply it was. Nice!

Anyways...was so happy to actually fix not one but two things that I needed to share...especially since that's been the extent of my BA-related activity for the last month or so. ;)

thanks much and 73,
ben, KD5BYB

From anchor at ec.rr.com Mon Oct 1 19:47:16 2018
From: anchor at ec.rr.com (Al Parker)
Date: Mon, 1 Oct 2018 19:47:16 -0400
Subject: [BoatAnchors] Rotary converter, power supplies.
In-Reply-To: <6e6bbda3-8509-2f29-4fdb-6dc016f98f3d@kd5byb.net>
References: <6e6bbda3-8509-2f29-4fdb-6dc016f98f3d@kd5byb.net>
Message-ID: <4f92a226-901d-49e2-561d-e7a3f959b4e3@ec.rr.com>

Hi Ben,

Thanks for all that info. Using epoxy in 2-3 applications sure seems good (you'd never want to disassemble it anyway). I'll probably never get into one of those wr supplies, but the epoxy deal is great for other similar problems.

Yes, I've sure noticed that these things gain weight the longer they sit around.

73,

Al, W8UT

www.boatanchors.org

www.hammarlund.info

"There is nothing -- absolutely nothing -- half so much worth doing as simply messing about in boats"
Ratty, to Mole

On 10/1/2018 7:19 PM, Ben Hall via BoatAnchors wrote:

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>
> -----
> BoatAnchors mailing list
> BoatAnchors at lists.theporch.com
> <https://lists.theporch.com/mailman/listinfo/boatanchors>

From gumbear at pacbell.net Mon Oct 1 23:29:02 2018
From: gumbear at pacbell.net (Arden Allen)
Date: Mon, 1 Oct 2018 20:29:02 -0700
Subject: [BoatAnchors] Rotary converter, power supplies.
In-Reply-To: <4f92a226-901d-49e2-561d-e7a3f959b4e3@ec.rr.com>
References: <6e6bbda3-8509-2f29-4fdb-6dc016f98f3d@kd5byb.net>
<4f92a226-901d-49e2-561d-e7a3f959b4e3@ec.rr.com>
Message-ID: <957BA4237608461C9999067ECA18F715@Lenovo>

>I thought converting Ge to Si took some doing, but okay, this
> made me happy as I figured that if I found an issue in the plain DCR with
> Ge transistors made from unobtainium...I likely could slap in an Si
> replacement.

The nasty little secret about bipolar junction transistors (BJT's) is they are primarily employed as current amplifiers, not voltage amplifiers. That means the difference in base-emitter voltage drop of about 0.4 volts has only marginal effect on operating parameters in most circuits. The one serious consideration for replacing transistors going from germanium to silicon is frequency response of the substitution device. Silicon types are generally faster. That requires some serious probing, head scratching, and possibly slowing down a transistor by adding some collector-base capacitance if parasitic oscillation is present. Try to find a good match for transistor I_c (collector current), h_{Fe} (DC current gain), f_T (gain bandwidth product) and collector capacitance (C_{ob}) and chances are things will work out just fine. Oh, pay attention to voltage ratings first.

Arden Allen
KB6NAX

From listown at nanniandjack.com Tue Oct 2 12:58:39 2018
From: listown at nanniandjack.com (List Manager)
Date: Tue, 02 Oct 2018 10:58:39 -0600
Subject: [BoatAnchors] Polite Editing of Posts
Message-ID: <b97a069c8747b885286eb33bf088765f@nanniandjack.com>

OK, Gang:

I am trying to relax and let you all self-police the list, and edit your posts to take out those parts of a post one is replying to that are not needed for context.

I read the DIGEST version (I get both digest and individual posts - at two different addresses) and having someone repeat an entire multi-paragraph post, adding only a short comment is ANNOYING, RUDE, and UNNECESSARY!

I remain ready and willing to help with issues people run into, but in the interests of my blood pressure and general temperament, I am letting folks out of the penalty box, and asking all of y'all to employ peer pressure to keep the signal-to-noise high. I can certainly be prevailed upon in extreme cases, and while I am emptying the Penalty Box, it remains available, and rather than fume and put up with all the BUTT HURT from people who can't be bothered to edit their posts, the Penalty Box will become a "Black Hole" - once gaining entrance to the Penalty Box, posts will simply be discarded, an automatic setting.

Laziness has consequences.

--

Jack Hill, W4KH - BoatAnchors Listowner/Archiver

listown at nanniandjack.com

"Plus ca change, plus c'est la meme chose"

"Il n'y a que les idiots qui ne changent jamais d'idee"

From kd5byb at kd5byb.net Tue Oct 2 15:09:26 2018

From: kd5byb at kd5byb.net (Ben Hall)

Date: Tue, 2 Oct 2018 14:09:26 -0500

Subject: [BoatAnchors] Rotary converter, power supplies.

In-Reply-To: <957BA4237608461C9999067ECA18F715@Lenovo>

References: <6e6bbda3-8509-2f29-4fdb-6dc016f98f3d@kd5byb.net>

<4f92a226-901d-49e2-561d-e7a3f959b4e3@ec.rr.com>

<957BA4237608461C9999067ECA18F715@Lenovo>

Message-ID: <1bfa630c-1e54-bf4a-1e47-6e0373d4d24b@kd5byb.net>

Hi Arden and list,

On 10/1/2018 10:29 PM, Arden Allen via BoatAnchors wrote:

> The nasty little secret about bipolar junction transistors (BJT's) is
> they are primarily employed as current amplifiers, not voltage
> amplifiers.? That means the difference in base-emitter voltage drop of
> about 0.4 volts has only marginal effect on operating parameters in most
> circuits.

This makes perfect sense. :) I spent about an hour on the Google trying to understand what I might need to do to sub a Si transistor for a Ge transistor and found nothing this concise. Most of the posts I found were for audio applications, which the majority are used as voltage amplifiers.

> The one serious consideration for replacing transistors going
> from germanium to silicon is frequency response of the substitution
> device.? Silicon types are generally faster.

This is very good to know! And again, something I didn't find in my searches. The 20 VDC power supply in the DCR 40-35 had the T0-3 case pass transistor replaced with a substitute of different part number, albeit still Ge. It had a lower beta but a pretty equivalent transition frequency if I recall correctly. Thinking that that pass transistor might have been bad, I had been poking around looking for first Ge substitutes then Si substitutes. The one transistor data site I was using had a pretty nice search engine, and would return all transistors with specs better than the original device...or really whatever you wanted for the various specifications. (IE: everything with a beta over 100 with an Ft over 1 in a T0-3 package NPN, etc...) When I saw some of the far higher frequency subs listed, I was thinking it might cause oscillation, so I'm glad to have that confirmed. Thankfully, that pass transistor was fine and works fine, so I left it alone. :)

I should be able to give the rotary converter a good full-load test in the coming few days, as long as things don't go sideways at home or work.

thanks much and 73,
ben, kd5byb

From gumbear at pacbell.net Wed Oct 3 14:40:50 2018
From: gumbear at pacbell.net (Arden Allen)
Date: Wed, 3 Oct 2018 11:40:50 -0700
Subject: [BoatAnchors] Fwd: Why We Served
In-Reply-To: <1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
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<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
Message-ID: <EA8346B555344BA8BD4ADBB6E949D00D@Polywell>

Hi Wilson,

Thanks for your comments. Most commenters replied only to me so the s/n ratio on the List is kept low. I'm so pissed off about the current goings on in the Senate I couldn't contain myself. Regarding which side of the debate I'm on, if Trump was my father I would disown him. I wouldn't let him be dog catcher. Now you know. Thanks.

Arden

-----Original Message-----

From: Wilson Lamb via BoatAnchors
Sent: Saturday, September 29, 2018 10:25 AM
To: boatanchors at lists.theporch.com
Cc: Wilson Lamb
Subject: [BoatAnchors] Fwd: Why We Served

Democracy is a messy business, especially when partisanship becomes more important than the common good.

There are so many disagreements right now that even defining the "common good" is difficult!

I love a good debate as much as anyone, but this is not the place to call names or troll for action!

Can we agree to leave politics off this antique radio group?

Since Arden's message is cryptic enough that I don't understand which side he's complaining about, we can stop with a neutral field.

73,
Wilson
W4BOH

BoatAnchors mailing list
BoatAnchors at lists.theporch.com
<https://lists.theporch.com/mailman/listinfo/boatanchors>

From johnmb at nc.rr.com Fri Oct 5 07:49:00 2018
From: johnmb at nc.rr.com (john)
Date: Fri, 5 Oct 2018 07:49:00 -0400
Subject: [BoatAnchors] Fwd: Why We Served
In-Reply-To: <EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
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<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
Message-ID: <f77005ae-81e9-7f7b-4305-3fcef7a1cd0@nc.rr.com>

Never a doubt!

On 10/3/2018 2:40 PM, Arden Allen via BoatAnchors wrote:

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III

From kd5byb at kd5byb.net Sun Oct 7 09:00:59 2018
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sun, 7 Oct 2018 08:00:59 -0500
Subject: [BoatAnchors] National RAO - how does the band indicator work?
In-Reply-To: <f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
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Message-ID: <39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>

Good morning all,

While cleaning the garage...came across a National RAO that's missing some parts. Specifically...the band-change indicator.

Can anyone share how the band-change indicator works mechanically? Google wasn't helpful and the few videos I could find showing RAO's don't show the band being changed.

I first thought it was as easy as the band-change knob turning say, 1 and 2/10s of a rotation, so that an indicator could just be attached to the knob itself, landing on a different selection each time the knob moves the catacomb to a new position. A quick experiment with painter's tape and a sharpie arrow shows no, that's not how it works.

Is there a gear or something that couples the band-change knob to the indicator?

Trying to figure out if I can try and build a substitute. This RAO isn't in really great shape, in fact it's missing the add-on first RF section, has some sheet metal issues, some corrosion, broken-off phasing knob, etc., so it may actually end up being a parts donor down the road...

thanks much and 73,
ben, kd5byb

From rbsingl at ilstu.edu Sun Oct 7 09:11:18 2018
From: rbsingl at ilstu.edu (Singley, Rodger)
Date: Sun, 7 Oct 2018 13:11:18 +0000
Subject: [BoatAnchors] National RAO - how does the band indicator work?
In-Reply-To: <39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
<f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
Message-ID:
<MWHPR03MB2816EA60A7E174F8C72AA06B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>

Ben,

The RAO is based upon the NC-100A which changed from the "HRO type knob/indicator" of the earlier sliding coil catacomb family to using a dial scale. It has been some time since I have been inside mine so I don't recall how the dial indicator is moved but you will probably have more luck searching for info on the civilian version instead of the military variant. I have a RAO which works very well and the grafted on RF stage definitely provides better image rejection on the higher bands.

Rodger WQ9E

-----Original Message-----

From: BoatAnchors <boatanchors-bounces at lists.theporch.com> On Behalf Of Ben Hall via BoatAnchors
Sent: Sunday, October 7, 2018 8:01 AM
To: Ham radios with tubes <boatanchors at lists.theporch.com>
Cc: Ben Hall <kd5byb at kd5byb.net>
Subject: [BoatAnchors] National RAO - how does the band indicator work?

From knjhanlon at msn.com Mon Oct 8 17:23:27 2018
From: knjhanlon at msn.com (JAMES HANLON)
Date: Mon, 8 Oct 2018 21:23:27 +0000
Subject: [BoatAnchors] RAO band indicator

Message-ID:

<MWHPR2001MB1774105853F7D8FAF7B77FE1A0E60@MWHPR2001MB1774.namprd20.prod.outlook.com>

Ben,

By far the best NC-100 mechanic I know is Bill Fizette, W2DGB. If anyone can help you, Bill can. I'd suggest you contact him at w2dgb at arrl.net . I do have a working RAO, but I think that to get to the band indicator mechanism I'd have to take the chassis out of the cabinet or at least take the dial cover off of the front panel to get to it. So please ask Bill, and if you can't get help from him get back to me and I'll try to help.

Jim Hanlon, W8KGI

From wlfuqu00 at uky.edu Tue Oct 9 09:20:15 2018

From: wlfuqu00 at uky.edu (Fuqua, Bill L)

Date: Tue, 9 Oct 2018 13:20:15 +0000

Subject: [BoatAnchors] bama working?

In-Reply-To:

<MWHPR2001MB1774105853F7D8FAF7B77FE1A0E60@MWHPR2001MB1774.namprd20.prod.outlook.com>

References:

<MWHPR2001MB1774105853F7D8FAF7B77FE1A0E60@MWHPR2001MB1774.namprd20.prod.outlook.com>

Message-ID:

<DM5PR03MB290834AE276D8BAB3978E884CBE70@DM5PR03MB2908.namprd03.prod.outlook.com>

I keep getting "The download limit has been reached, please come back later to try again" for the past few days.

Is there a problem with site?

73

Bill wa4lav

<<https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Flists.theporch.com%2Fmailman%2Flistinfo%2Fboatanchors&data=02%7C01%7Cwlfuqu00%40uky.edu%7C51d4a0d74c874a6fbfff08d62d644e58%7C2b30530b69b64457b818481cb53d42ae%7C0%7C0%7C636746306175536926&sdata=tYRSvtYMsSfYh0iNJqNqli%2BSC1kupC9IKPD02An9d%2Fs%3D&reserved=0>

url=https%3A%2F%2Flists.theporch.com%2Fmailman%2Flistinfo%2Fboatanchors&data=02%7C01%7Cwlfuqu00%40uky.edu%7C51d4a0d74c874a6fbfff08d62d644e58%7C2b30530b69b64457b818481cb53d42ae%7C0%7C0%7C636746306175536926&sdata=tYRSvtYMsSfYh0iNJqNqli%2BSC1kupC9IKPD02An9d%2Fs%3D&reserved=0>

From gharmon at idworld.net Tue Oct 9 09:30:30 2018

From: gharmon at idworld.net (Gary H. Harmon, Jr.)

Date: Tue, 9 Oct 2018 08:30:30 -0500

Subject: [BoatAnchors] bama working?

In-Reply-To:

<DM5PR03MB290834AE276D8BAB3978E884CBE70@DM5PR03MB2908.namprd03.prod.outlook.com>

References:

<MWHPR2001MB1774105853F7D8FAF7B77FE1A0E60@MWHPR2001MB1774.namprd20.prod.outlook.com>

<DM5PR03MB290834AE276D8BAB3978E884CBE70@DM5PR03MB2908.namprd03.prod.outlook.com>

Message-ID: <assp.08206fad82.005501d45fd4\$40449950\$c0cdcbf0\$idworld.net>

Working fine here Bill.

Gary H. Harmon, Jr. - K5JWK - HAM Radio and ATARI Archaeologist

6003 Archwood

San Antonio, TX 78239-1504

(210) 657-1549 <home>

(210) 884-6926 <cell and text>

(210) 657-1549 <FAX with prior notification>

gharmon at idworld.net

"Retirement = Every day is a Saturday except Sunday"

"Real radios glow in the dark"

"Too many projects, not enough time"

<http://www.grissomroadcoc.org>

-----Original Message-----

From: BoatAnchors [mailto:boatanchors-bounces at lists.theporch.com] On Behalf Of Fuqua, Bill L

Sent: Tuesday, October 09, 2018 8:20 AM

To: Ham radios with tubes

Subject: [BoatAnchors] bama working?

I keep getting "The download limit has been reached, please come back later to try again" for the past few days.

Is there a problem with site?

73

Bill wa4lav

&<<https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Flists.theporch.com%2Fmailman%2Flistinfo%2Fboatanchors&data=02%7C01%7Cw1fuqu00%40uky.edu%7C51d4a0d74c874a6fbfff08d62d644e58%7C2b30530b69b64457b818481cb53d42ae%7C0%7C0%7C636746306175536926&data=tYRSVtYMsSfYh0iNJqNQ1i%2BSC1kupC9IKPD02An9d%2Fs%3D&reserved=0>>

BoatAnchors mailing list
BoatAnchors at lists.theporch.com
<https://lists.theporch.com/mailman/listinfo/boatanchors>

From oldradio at comcast.net Tue Oct 9 09:36:35 2018
From: oldradio at comcast.net (John Dilks)
Date: Tue, 9 Oct 2018 09:36:35 -0400 (EDT)
Subject: [BoatAnchors] bama working?
In-Reply-To: <assp.08206fad82.005501d45fd4\$40449950\$c0cdcbf0\$idworld.net>
References:
<MWHPR2001MB1774105853F7D8FAF7B77FE1A0E60@MWHPR2001MB1774.namprd20.prod.outlook.com>
<DM5PR03MB290834AE276D8BAB3978E884CBE70@DM5PR03MB2908.namprd03.prod.outlook.com>
<assp.08206fad82.005501d45fd4\$40449950\$c0cdcbf0\$idworld.net>
Message-ID: <108652232.102888.1539092195845@connect.xfinity.com>

Bill,

Try removing your cookies in you browser.

73, John Dilks, K2TQN

Web Site - www.k2tqn.com
Having fun smelling hot rosin and solder again.

> On October 9, 2018 at 9:30 AM "Gary H. Harmon, Jr. via BoatAnchors" <boatanchors at lists.theporch.com> wrote:
>
>
> Working fine here Bill.
>
> Gary H. Harmon, Jr. - K5JWK - HAM Radio and ATARI Archaeologist
> 6003 Archwood
> San Antonio, TX 78239-1504
> (210) 657-1549 <home>
> (210) 884-6926 <cell and text>
> (210) 657-1549 <FAX with prior notification>
> gharmon at idworld.net
>
> "Retirement = Every day is a Saturday except Sunday"
> "Real radios glow in the dark"
> "Too many projects, not enough time"
>
> <http://www.grissomroadcoc.org>

>
> -----Original Message-----
> From: BoatAnchors [mailto:boatanchors-bounces at lists.theporch.com] On Behalf
> Of Fuqua, Bill L
> Sent: Tuesday, October 09, 2018 8:20 AM
> To: Ham radios with tubes
> Subject: [BoatAnchors] bama working?
>
> I keep getting "The download limit has been reached, please come back
> later to try again" for the past few days.
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>
> 73
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> Bill wa4lav
>
> <<https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Flists.theporch.com%2Fmailman%2Flistinfo%2Fboatanchors&data=02%7C01%7Cwl%2Ffuqu00%40u%2Fky.edu%7C51d4a0d74c874a6fbfff08d62d644e58%7C2b30530b69b64457b818481cb53d42ae%7C0%7C0%7C636746306175536926&sdata=tYRSVtYMsSfYh0iNJqNqli%2BSC1kupC9IKP%2FD02An9d%2Fs%3D&reserved=0>>
>
> -----
> BoatAnchors mailing list
> BoatAnchors at lists.theporch.com
> <https://lists.theporch.com/mailman/listinfo/boatanchors>
>
>
> -----
> BoatAnchors mailing list
> BoatAnchors at lists.theporch.com
> <https://lists.theporch.com/mailman/listinfo/boatanchors>

From kd5byb at kd5byb.net Thu Oct 11 18:32:04 2018

From: kd5byb at kd5byb.net (Ben Hall)

Date: Thu, 11 Oct 2018 17:32:04 -0500

Subject: [BoatAnchors] National RAO - how does the band indicator work?

In-Reply-To:

<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>

References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>

<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>

<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>

<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>

<f77005ae-81e9-7f7b-4305-3fcef7a1cd0@nc.rr.com>

<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>

<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>

Message-ID: <d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>

Hi Rodger and all,

On 10/7/2018 8:11 AM, Singley, Rodger wrote:

> The RAO is based upon the NC-100A which changed from the "HRO type
> knob/indicator" of the earlier sliding coil catacomb family to using
> a dial scale. It has been some time since I have been inside mine so
> I don't recall how the dial indicator is moved but you will probably
> have more luck searching for info on the civilian version instead of
> the military variant.

I did a lot of looking around based on your suggestions and the suggestions of others. The RAO is different from the NC-100A - in fact an NC-100A is about three feet from me as I'm typing this...and another of it's earlier relatives, a Civil Aeronautics Administration RCK/RCP is about eight feet away. :) I'm not sure there was another similar band-read out schedule used outside the RAO series.

The progression in band indication of the sliding-catacomb Nationals is quite neat:

The RCP/RCK is dead simple - there are holes in the front panel, and a white target on the sliding-catacomb that comes into view thru the front panel hole when tuned to the particular frequency range indicated by that hole.

National went a little overboard on the NC-100A series, there is an elaborate cord and pulley system that raises and lowers the dial frequency read-out needle as the catacomb is moved. The one is my NC-100A is broken and missing parts, so it's always retracted, like it's set to the 200 to 400 kHz band regardless of where the catacomb is located.

After looking carefully at my RAO, which has been hacked in more than one place, the best I can tell was that there had been pins on the front-panel gear that drives the shaft that moves the catacomb. These were cut off by a previous owner. (why do people do stuff like this? why?) I suspect that the rotary collar on the outside of the band-change knob was driven by these now-removed pins, so that as band change was rotated, the pins would cause the frequency read-out on the rotary collar to move once increment per band. But, like I said, this was a guess based on what's missing and what I can tell as I couldn't locate any manual showing the RAO mechanism or anything similar, so I could be totally bonkers.

I'm still assessing this RAO. Besides the 1st RF "add-on" section being removed, the band indicator being missing, it doesn't have the front-panel plates that contain the text lettering for the controls, has only one original knob, a broken-off crystal phasing control, is missing the original output transformer but has a "universal" replacement that

can be correctly configured for the 6K6 output, has a twist-lock non-grounded AC plug where the 1st RF 6K7 was, and NO fuses. Thankfully, when the previous owner remove the 1st RF "add-on" section, he or she carefully removed the wiring...so it's not too horrendous.

Being me, and somehow being drawn to hopeless basket-cases like this, I'll probably get it playing again. Something I love about crappy examples like this is that if I completely mess it up, it was junk anyways to start with. ;)

thanks much and 73,
ben, kd5byb

From kd5byb at kd5byb.net Mon Oct 15 19:41:36 2018
From: kd5byb at kd5byb.net (Ben Hall)
Date: Mon, 15 Oct 2018 18:41:36 -0500
Subject: [BoatAnchors] Please remind me how to successfully strip WWII-era wire
In-Reply-To: <d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
<EA8346B55344BA8BD4ADBB6E949D00D@Polywell>
<f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>
<d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>
Message-ID: <fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>

Good evening all,

The other day I needed to strip a wire found in the basket-case National RAO. This wire has a woven outer braid, and what appears to be a solid inner layer. (Celanese wire? Not sure.)

Out came the t-strippers...used the correct set of teeth, 20 AWG...and it was a disaster - incompletely cut frayed outer fabric...and the inner layer was still on the wire. Hmmm.

I don't recall having issues like this in the past with similar radios. But I don't recall doing anything different than just grabbing the t-strippers and going after it.

Please remind me - how does one successfully strip old WWII-era wire like this without it being a total disaster?

Google search either says "just use regular strippers" or "just push

back the fabric" which does nothing for the inner insulation.

I wonder if the strippers are just dull?

Thanks much and 73,
ben, kd5byb

From nbroline at austin.rr.com Wed Oct 17 11:31:53 2018
From: nbroline at austin.rr.com (Nick Broline)
Date: Wed, 17 Oct 2018 10:31:53 -0500
Subject: [BoatAnchors] WRL Band Trotter?
Message-ID: <D4F95F853613405FB89B4DFAD6BBF31C@DualAMD64>

I have come into an early WRL transmitter having "Band Trotter" on the front panel. I've been unable to find a reference to this model, although many references come up under "Globe Trotter."

This model was a kit in that there is no band switch installed when built, although front panel holes and silk screens are present. A set of plug-in coils having tuning capacitors inside appear HB. There are no external tuning caps on the front panel. I have not removed the case yet to compare with pictures in the Globe Trotter manual, so all of this is from looking through the case lid.....very superficial.

Does anyone have insight into the progression of early WRL models that might clear up this question. Was the Band Trotter released before WRL adopted the "Globe" line?

73

Nick Broline W5FUA

512 934 7126

We shall not cease from exploring

And at the end of exploringwrl

Will be to arrive where we started

And know the place for the first time.

T.S. Eliot--"Little Gidding"

From ranickel at comcast.net Wed Oct 17 12:22:24 2018
From: ranickel at comcast.net (Robert Nickels)
Date: Wed, 17 Oct 2018 11:22:24 -0500
Subject: [BoatAnchors] WRL Band Trotter?
In-Reply-To: <D4F95F853613405FB89B4DFAD6BBF31C@DualAMD64>
References: <D4F95F853613405FB89B4DFAD6BBF31C@DualAMD64>
Message-ID: <c165ed37-f413-79b9-f627-bbb3505b4343@comcast.net>

On 10/17/2018 10:31 AM, Nick Broline wrote:

> Does anyone have insight into the progression of early WRL models that might
> clear up this question. Was the Band Trotter released before WRL adopted the
> "Globe" line?

Nick,

This is very interesting and I'd love to see some pics of the transmitter you have, as I've never heard of the "Band Trotter" before.?? But the story of the Globe Trotter, which was Leo's first transmitter, introduced in 1946 just after he changed the name of his company from Wholesale to World (Radio Laboratories) is told in Leo's book "In Tune with Leo".

The design came from CW ace Ted McElroy and was always called the Globe Trotter after it's June '46 introduction in QST.?? In fact that is the "rest of the story", because RCA had copyrighted that name for use on some of it's shortwave radios and sent Leo a letter telling him to stop using it.?? He was unable to convince them that no one would confuse his transmitter for their receivers, and thought about changing the name to "Globe Ranger".?? But he had 1000 front panels already made up with the Globe Trotter name? on them, and managed to convince RCA to allow him to use them up before he changed the name.? Of course that turned out to be way more than a lifetime supply and the name was never changed.??? The next transmitter was the first? "King 275" in Aug. 1947.??? No mention of a Band Trotter...so I'd say you have a mystery transmitter on your hands!

73, Bob W9RAN

From k1lky68 at gmail.com Thu Oct 18 14:22:03 2018
From: k1lky68 at gmail.com (Roy Morgan)
Date: Thu, 18 Oct 2018 14:22:03 -0400
Subject: [BoatAnchors] Please remind me how to successfully strip WWII-era wire
In-Reply-To: <fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>

<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
<f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>
<d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>
<fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>
Message-ID: <E7025866-6537-4E02-877F-A580FDAE03F0@gmail.com>

> On Oct 15, 2018, at 7:41 PM, Ben Hall via BoatAnchors <boatanchors at lists.theporch.com <mailto:boatanchors at lists.theporch.com>> wrote:...
> Out came the t-strippers...used the correct set of teeth, 20 AWG...and it was a disaster -

Ben,

I'm not familiar with the name ?t-strippers?. I have here two different jawed wire strippers that close upon the wire and hold it as the stripping teeth close and are then moved away from the clamping jaws as you continue to squeeze the handles. The two strippers have overlapping wire sizes.

I wonder if that's what you mean by ?t-strippers?.

Roy

Roy Morgan
k1lky68 at gmail.com <mailto:k1lky68 at gmail.com>

From kd5byb at kd5byb.net Thu Oct 18 18:02:24 2018
From: kd5byb at kd5byb.net (Ben Hall)
Date: Thu, 18 Oct 2018 17:02:24 -0500
Subject: [BoatAnchors] Please remind me how to successfully strip WWII-era wire
In-Reply-To: <E7025866-6537-4E02-877F-A580FDAE03F0@gmail.com>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
<f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>
<d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>
<fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>
<E7025866-6537-4E02-877F-A580FDAE03F0@gmail.com>
Message-ID: <2639d08a-923d-c577-2567-8f3b8157d83e@kd5byb.net>

Good evening all,

Thank you much for the replies - I got some good suggestions.

I do not think that the wire in question is Litz wire. It has a woven braid made from some sort of fabric, an insulation layer that appears to be a plastic of some sort, then a regular stranded inner core. The core has no fabric inside the stranded core. When I've seen Litz in the past, it seems like the conductors and an inner fabric are woven together...then covered in an insulating layer. Or at least that's what I recall it looking like, it's been a minute since I worked with any.

The term "T-Strippers" raised some questions. These are indeed the type of strippers where they are two identical jaws, mounted back to back - with each jaw having stripping teeth, where the teeth bite thru the insulation without nicking the core, and then you pull the insulation off the end while keeping the jaws closed. Or at least that's the theory, hahaha. ;)

I had always called these t-strippers...but after some googling...that doesn't seem to be a common term. I asked a couple of the electronics techs at work what they called them...and they just call them wire strippers. Turns out that the T-Stripper is a trademark for strippers of the design above made by the Ideal company. Seems like everyone makes a version of these - Gardner-Bender, Klein, Wiha, Greenlee, etc...

I had wondered in my original post if my strippers might be dull. After thinking about the strippers I was using...I probably bought them prior to Y2K...and they've stripped a *ton* of wire. Looking at the jaws under magnification, I can definitely see that they have some wear. Especially on the 20 and 22 AWG jaws, which if I remember right, was one of the set of jaws I was trying to use to strip the WWII-era wire in the RAO.

(Speaking of the RAO...made a new extension for the broken-off phasing knob shaft last night out of some 1/4" phenolic stock.)

These strippers are \$10 items, so I ordered two new pairs made by Hakko.

Several of the techs at work like the Hakko-made stuff...and after recently buying a Hakko desoldering gun that is just so nice...I figured for \$10 ea, about the same cost as any other name brand, why not? They arrived today, but I've yet to try them out. They are "Made in Italy." Interesting. I will try them this weekend and report back. :)

thanks much and 73,
ben, KD5BYB

From dh2fa at me.com Thu Oct 18 23:10:57 2018
From: dh2fa at me.com (Heinz Breuer)
Date: Fri, 19 Oct 2018 05:10:57 +0200
Subject: [BoatAnchors] Please remind me how to successfully strip
WWII-era wire
In-Reply-To: <2639d08a-923d-c577-2567-8f3b8157d83e@kd5byb.net>
References: <1168352885.9290458.1538241582851.JavaMail.zimbra@embarqmail.com>
<244601435.9292654.1538241826545.JavaMail.zimbra@embarqmail.com>
<1118189385.9294031.1538241928499.JavaMail.zimbra@embarqmail.com>
<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>
<f77005ae-81e9-7f7b-4305-3fcefa7a1cd0@nc.rr.com>
<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>
<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>
<d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>
<fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>
<E7025866-6537-4E02-877F-A580FDAE03F0@gmail.com>
<2639d08a-923d-c577-2567-8f3b8157d83e@kd5byb.net>
Message-ID: <5E3B6F67-57D5-433C-9452-387662980535@me.com>

Hello Ben,
I am looking at a spool of Litze right now. Conductors and fabric are not woven together. This would be "Tinsel" as used on very old headphones.

The Litz I have are individual conductors out of enameled copper wires and an outer fabric.

vy 73 Heinz DH2FA, KM5VT

Von meinem iPhone gesendet

> Am 19.10.2018 um 00:02 schrieb Ben Hall via BoatAnchors <boatanchors at lists.theporch.com>:

>

> Good evening all,

>

> Thank you much for the replies - I got some good suggestions.

>

> I do not think that the wire in question is Litz wire. It has a woven braid made from some sort of fabric, an insulation layer that appears to be a plastic of some sort, then a regular stranded inner core. The core has no fabric inside the stranded core. When I've seen Litz in the past, it seems like the conductors and an inner fabric are woven together...then covered in an insulating layer. Or at least that's what I recall it looking like, it's been a minute since I worked with any.

>

> The term "T-Strippers" raised some questions. These are indeed the type of strippers where they are two identical jaws, mounted back to back- with each jaw having stripping teeth, where the teeth bite thru the insulation without nicking

the core, and then you pull the insulation off the end while keeping the jaws closed. Or at least that's the theory, hahaha. ;)

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> I had always called these t-strippers...but after some googling...that doesn't seem to be a common term. I asked a couple of the electronics techs at work what they called them...and they just call them wire strippers. Turns out that the T-Stripper is a trademark for strippers of the design above made by the Ideal company. Seems like everyone makes a version of these - Gardner-Bender, Klein, Wiha, Greenlee, etc...

>

> I had wondered in my original post if my strippers might be dull. After thinking about the strippers I was using...I probably bought them prior to Y2K...and they've stripped a *ton* of wire. Looking at the jaws under magnification, I can definitely see that they have some wear. Especially on the 20 and 22 AWG jaws, which if I remember right, was one of the set of jaws I was trying to use to strip the WWII-era wire in the RAO.

>

> (Speaking of the RAO...made a new extension for the broken-off phasing knob shaft last night out of some 1/4" phenolic stock.)

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> These strippers are \$10 items, so I ordered two new pairs made by Hakko. Several of the techs at work like the Hakko-made stuff...and after recently buying a Hakko desoldering gun that is just so nice...I figured for \$10 ea, about the same cost as any other name brand, why not? They arrived today, but I've yet to try them out. They are "Made in Italy." Interesting. I will try them this weekend and report back. :)

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> -----
> BoatAnchors mailing list

> BoatAnchors at lists.theporch.com

> <https://lists.theporch.com/mailman/listinfo/boatanchors>

From wa5cab at cs.com Fri Oct 19 01:18:21 2018

From: wa5cab at cs.com (Robert Downs)

Date: Fri, 19 Oct 2018 00:18:21 -0500

Subject: [BoatAnchors] Please remind me how to successfully strip
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In-Reply-To: <5E3B6F67-57D5-433C-9452-387662980535@me.com>

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<EA8346B555344BA8BD4ADBB6E949D00D@Polywell>

<f77005ae-81e9-7f7b-4305-3fcef7a1cd0@nc.rr.com>

<39b693d0-bc89-0c7c-0bc3-5c2faab30cf1@kd5byb.net>

<MWHPR03MB2816EA60A7E174F8C72AA068B8E50@MWHPR03MB2816.namprd03.prod.outlook.com>

<d7876f80-569e-cf24-522d-1df43cb76ae8@kd5byb.net>

<fd74c4b7-145c-9a20-5354-7c9e50ffcd92@kd5byb.net>
<E7025866-6537-4E02-877F-A580FDAE03F0@gmail.com>
<2639d08a-923d-c577-2567-8f3b8157d83e@kd5byb.net>
<5E3B6F67-57D5-433C-9452-387662980535@me.com>
Message-ID: <019301d4676b\$27da8160\$778f8420\$@com>

The individual strands of Litz wire are very fine individually insulated enameled round copper wire. The individual strands of tinsel wire are flat strips of copper foil.

And I don't know why, but the system will not allow me to delete and of the text below.

Robert Downs

-----Original Message-----

From: BoatAnchors [mailto:boatanchors-bounces at lists.theporch.com] On Behalf Of Heinz Breuer via BoatAnchors
Sent: Thursday, October 18, 2018 22:11
To: Ham radios with tubes
Cc: Heinz Breuer
Subject: Re: [BoatAnchors] Please remind me how to successfully strip WWII-era wire

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